Title: Calibration Of Megger BM80 Series Digital Insulation And Continuity Testers

Scope

Work Instruction for the internal calibration of Megger BM80 Series Digital Insulation and Continuity Tester. To be used in the absence of a manufacturers calibration instruction.

Preparation

Calibration must be carried out using Category A Master instruments as required.
Equipment required;-

1.1 Datron 9100 Calibrator.
1.2 Keithley DMM Model 136.
1.3 High Resistance Box.
1.4 Decade Resistance Box.
1.5 250kΩ Resistor.
1.6 500 kΩ Resistor.
1.7 IMΩ Resistor.

Method

2.1 All calibration results must be entered on the results sheets (see appendix A).

2.2 Note the lab temp / relative humidity and enter on calibration results sheet.

2.3 Carry out tests 1 to 7 using item 1.1.

2.4 Carry out tests 8 to 12 using items 1.2, 1.5, 1.6, and 1.7.

2.5 Carry out tests 13 and 14 using item 1.3.

2.6 Carry out tests 15 to 21 using items 1.4.

2.7 Carry out tests 22 to 63 using item 1.3.

2.8 Complete the results sheet header and enter Pass / Fail.

- All records must be kept for audit purposes

References

Appendix A Calibration Results for Megger BM80 Series Digital Insulation and Continuity Tester

Documents
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Appendix A
Calibration Results for Megger BM80 Series Digital Insulation and Continuity Tester

Model ……Serial No ……..

Date ……..Result ……

Lab Temp / RH ……Operator ……

User Location ……Certificate No ……

Accuracies quoted are from the manufacturer's specification or relevant British Standard.

AC Voltage Range
UUT Accuracy < 450V: ± 1% ± 1d; > 450V : ± 2% + 1d
< 450V, 400Hz: ± 5% ± 2d

Test No	UUT Indication	Calibrator Output Volts	Allowed Limits	Result
1	300V (50Hz)		296 to 304	Pass / Fail
2	500V (50Hz)		489 to 511	Pass / Fail
3	400V (400Hz)		378 to 422	Pass / Fail

DC Voltage Range
UUT Accuracy < 450V: ± 1% ± 1%; > 450V : ± 2% + 1d

Test No	UUT Indication	Calibrator Output Volts	Allowed Limits	Result
4	300V		296 to 304	Pass / Fail
5	500V		489 to 511	Pass / Fail

Test 6 Did the analogue display operate satisfactorily during tests 1 to 5? Pass / Fail

Test 7 **Audible Warning**
Switch UUT to any insulation range.
Apply 30V DC
Does the UUT revert to voltage range and an audible warning sound? Pass / Fail

Insulation Ranges – DC Output Voltages
UUT Accuracy : As indicated under "allowed limits" and as stated value of "load resistor"

Test No	Range	Load Resistor	Output Voltage	Allowed Limits	Results
8	50V	250 kΩ		50V min	Pass / Fail
9	100V	250 kΩ		100V min	Pass / Fail
10	250V	250 kΩ		250V min	Pass / Fail
11	500V	500 kΩ		500V min	Pass / Fail
12	1000V	1MΩ		1000V min	Pass / Fail

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